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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,636	09/03/2004	Naoto Yokoyama	61982(70904)	3486

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EXAMINER

MAKI, STEVEN D

ART UNIT	PAPER NUMBER
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1733

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/506,636	YOKOYAMA ET AL.	
	Examiner	Art Unit	
	Steven D. Maki	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 1-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 18-29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>010907.081606.090304</u> . | 6) <input type="checkbox"/> Other: ____. |

- 1) Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

Group I, claim(s) 1-8, drawn to method for holding a substrate in a vacuum.

Group II, claim(s) 9-17, drawn to method for manufacturing
a liquid crystal display device.

Group III, claim(s) 18-29, drawn to holding device.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

The inventions listed as Groups I, II and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Group I, but not Group III requires a method for holding a substrate in a vacuum.
Group II, but not Groups I and III, requires applying sealing material and assembling two substrates in a vacuum. Furthermore, the common special technical feature of adhesive pad or adhesive sheet made from a material containing a diene based resin is anticipated by Mazurek et al and Iwamoto. See 102 rejections set forth below in this office action. Accordingly, the special technical feature linking these groups of claims does not provide a contribution over the prior art. Therefore, the holding that these groups do not relate to a single general inventive concept is proper.

- 2) During a telephone conversation with Steven M. Jensen on 1-16-07 by examiner Christopher Schatz a provisional election was made without traverse to prosecute the invention of Group III, claims 18-29. Affirmation of this election must be made by

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applicant in replying to this Office action. Claims 1-17 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3) Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

4) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5) Claims 18-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 18, it is unclear how "that holds" affects the scope of claim 18 because claim 18 is directed to an apparatus (i.e. device) whereas "holds" is a method step. In claim 18, it is suggested to change "that holds" to --for holding--.

In claim 24, there is no antecedent basis for "the raised portion".

As to claim 28 ("is held"), it is unclear what additional limitation is being claimed.

6) Applicant is advised that should claim 22 be found allowable, claim 28 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing

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one claim to object to the other as being a substantial duplicate of the allowed claim.

See MPEP § 706.03(k).

Claim 28 has the same scope as claim 22 because claim 28 merely describes the intended use of the substrate holding device.

7) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Mazurek et al

9) **Claims 18, 22, 28 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Mazurek et al (US 5,650,215).**

The claimed substrate holding device is anticipated by Mazurek et al. See figures, col. 1 lines 18-29, col. 3 lines 21-36, col. 7 lines 1-7, col. 11 lines 45-63, col. 13 lines 41-67, col. 14 lines 1-19, col. 15 lines 45-53. Natural rubber (one of the disclosed pressure sensitive adhesives) is an unsaturated diene based resin. The claimed substrate holding device reads on the pressure sensitive adhesive layer disclosed by

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Mazurek et al. In claim 18, "that holds a substrate in a vacuum" relates to intended use of the device and fails to require apparatus structure not disclosed by Mazurek et al.

Claim 29, fails to quantify the amount of released pressure and thereby fails to define structure not disclosed by Mazurek et al.

10) Claims 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazurek et al in view of Sher et al (US 6,197,397).

As to claims 23-27, it would have been obvious to provide Mazurek et al's pressure sensitive adhesive with fine raised portions or raised portions in the form of hexagons as claimed since (1) Mazurek et al teaches providing the pressure sensitive adhesive with positive or negative features (surface irregularities) so that the adhesive is a repositionable adhesive and (2) Sher et al, also directed to repositionable pressure sensitive adhesives having "surface irregularities", suggests using multiple patterns / hexagon shapes for such a pressure sensitive adhesive (figures, col. 1 lines 1-32, col.2 lines 31-67, col. 3 lines 1-6, 18-24, 33-39, col. 4 lines 27-35, col. 5 lines 54-67, col. 6 lines 1-11, 20-39, col. 7 lines 24-33, col. 10 lines 5-11, col. 20 lines 63-67, col. 21 lines 1-7).

Iwamoto

11) Claims 18, 19 and 29 are rejected under 35 U.S.C. 102(a),(b) as being anticipated by Iwamoto (US 5,869,150).

Iwamoto discloses a carrier jig 1 comprising a carrier 2 (epoxy type resin plate) and a sticky layer 3 wherein the sticky layer 3 is capable of releasably adhering to a glass substrate 5. At column 3 lines 9-25, Iwamoto teaches using natural rubber (an

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unsaturated diene based resin) or polybutadiene (an unsaturated diene based resin) for the sticky layer.

The claimed substrate holding device is anticipated by Iwamoto's carrier jig. As to claims 18 and 19, the claimed "adhesive pad or adhesive sheet" reads on the polybutadiene sticky layer 3. The description of "that holds a substrate in a vacuum" relates to intended use and fails to require additional apparatus structure not disclosed by Iwamoto. As to claim 29, the sticky layer has "flexibility and adhesion" because it is made of polybutadiene. Furthermore, the sticky layer has the capability of maintaining its shape after a release or applied external pressure because it is permanently adhered to the epoxy plate carrier. Also, Claim 29, fails to quantify the amount of released pressure and thereby fails to define structure not disclosed by Iwamoto.

12) Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto in view of Joffe et al (US 5,407,519).

As to claims 20 and 21, it would have been obvious to one of ordinary skill in the art to use Iwamoto's carrier jig instead of suction cups 264 (figure 14) in Joffe et al's apparatus since (1) Joffe et al, directed to the LCD art, teaches using suction cups 264, which move through holes in a stage, to temporarily hold a substrate and (2) Iwamoto, directed the LCD art, suggests using the carrier jig with the polybutadiene sticky layer to temporarily hold a substrate.

13) Claims 22 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto and Mazurek et al.

As to claims 22 and 28, it would have been obvious to one of ordinary skill in the art to provide Iwamoto's sticky layer with the claimed surface irregularities in view of (1) Iwamoto's teaching that the sticky layer is repeatedly used and (2) Mazurek et al's suggestion to provide a pressure sensitive adhesive sheet with "surface irregularities" to facilitate repositioning the pressure sensitive adhesive sheet. Alternatively, it would have been obvious to use polybutadiene for the pressure sensitive adhesive of the adhesive sheet of Mazurek et al since Iwamoto teaches that either natural rubber or polybutadiene may be used as a sticky layer for temporarily holding a product.

14) Claims 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto and Mazurek et al as applied above and further in view of Sher et al.

As to claims 23-27, it would have been obvious to provide Iwamoto's sticky layer or Mazurek et al's pressure sensitive adhesive with fine raised portions or raised portions in the form of hexagons as claimed since (1) Mazurek et al teaches providing the pressure sensitive adhesive with positive or negative features (surface irregularities) so that the adhesive is a repositionable adhesive and (2) Sher et al, also directed to repositionable pressure sensitive adhesives, suggests using multiple patterns / hexagon shapes for such a pressure sensitive adhesive (figures, col. 1 lines 1-32, col.2 lines 31-67, col. 3 lines 1-6, 18-24, 33-39, col. 4 lines 27-35, col. 5 lines 54-67, col. 6 lines 1-11, 20-39, col. 7 lines 24-33, col. 10 lines 5-11, col. 20 lines 63-67, col. 21 lines 1-7).

Remarks

15) The remaining references are of interest.

16) No claim is allowed.


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17) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven D. Maki
April 1, 2007


STEVEN D. MAKI
PRIMARY EXAMINER
4-2-07